AMENDMENTS

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A batch ion implantation system comprising:

an ion source that controllably generates an ion beam containing a selected species;

a beamline assembly that processes the ion beam from the ion source;

an angle adjuster that selectively alters a path of the ion beam according to a current target position and a selected implant angle; and

an end station comprising a spinning disk that rotates about an axis non-parallel to the path of the ion beam and is movable in a linear direction and pads affixed to an outer edge of the spinning disk that hold target wafers at an offset angle.

2. (Original) The system of claim 1, wherein the current target position is a distance from a center of a current wafer of the target wafers.

3. (Original) The system of claim 1, wherein the beamline assembly comprises a mass analyzer that selectively removes undesired particles from the ion beam and a linear accelerator that selectively accelerates particles within the ion beam to a selected energy level.

4. (Original) The system of claim 1, wherein the end station further comprises a linear motor that controllably moves the target wafers in the linear direction.

5. (Original) The system of claim 1, wherein the angle adjuster comprises a first bending element and a second bending element, wherein the first bending element alters the path of the ion beam by a first offset angle in a first direction and the second

bending element alters the path of the ion beam from the first bending element by a second offset angle in a second direction, wherein the second direction is opposite the first direction.

6. (Original) The system of claim 5, wherein the first bending element generates an electric field across the path of the ion beam to alter the path of the ion beam.

7. (Original) The system of claim 5, wherein the first and second bending elements generate magnetic fields across the path of the ion beam.

8. (Original) The system of claim 5, further comprising an angle element controller that obtains the current target position from the end station, generates a first control signal according to the current target position, generates a second control signal according to the current target position, applies the first control signal to the first bending element, and applies the second control signal to the second bending element.

9. (Original) The system of claim 1, wherein the angle adjuster comprises a bending element that alters the path of the ion beam by an offset angle.

10. (Original) The system of claim 9, further comprising a dose control component that controls the ion source and adjusts a dose for the ion beam generated by the ion source as a function of wafer rotation.

11. (Original) The system of claim 9, further comprising a dose control component that adjusts movement of the end station in the linear direction to keep an applied dose within acceptable limits.

12. (Original) An angle adjuster for a batch ion implantation system comprising:

a first bending element that receives an ion beam and alters the path of the ion beam by a first offset angle in a first direction;

a second bending element that receives the ion beam from the first bending element and alters the path of the ion beam by a second offset angle in a second direction, wherein the second direction is opposite the first direction; and

an angle adjuster controller coupled to the first bending element and the second bending element that selects the first offset angle and the second offset angle according to a desired implant angle and a current target position.

13. (Original) The angle adjuster of claim 12, wherein the angle adjuster further generates control signals received by the first bending element and the second bending element in order to control their operation.

14. (Original) The angle adjuster of claim 12, wherein the first bending element is comprised of a pair of plates across which an electric field is generated.

15. (Original) The angle adjuster of claim 12, wherein the first bending element is comprised of a pair of plates across which a magnetic field is generated.

16. (Canceled)

17. (Original) The angle adjuster of claim 12, further comprising a focusing element that receives the ion beam, focuses the ion beam, and directs the ion beam towards the first bending element.

18. (Original) The angle adjuster of claim 12, wherein the first bending element is further operable to selectively focus the ion beam.

19. (Original) An angle adjuster for a batch ion implantation system comprising:

a bending element that receives an ion beam and alters the path of the ion beam by an offset angle in a single axis;

an angle adjuster controller coupled to the bending element that selects the offset angle according to a desired implant angle and a current target position; and

an ion source that generates the ion beam.

20. (Original) The angle adjuster of claim 19, wherein the bending element is comprised of a pair of plates across which an electric field is generated.

21. (Original) The angle adjuster of claim 19, wherein the bending element is comprised of a pair of plates across which a magnetic field is generated.

22. (Original) The angle adjuster of claim 19, wherein the bending element is further operable to selectively focus the ion beam.

23. (Original) A method of performing ion implantation comprising:

generating an ion beam comprising a selected species;

selectively removing undesired materials from the generated ion beam;

accelerating the ion beam to a selected energy level; and

altering a path of the ion beam according to a desired implant angle and a current target position.

24. (Original) The method of claim 23, further comprising implanting the selected species at the target position and at the desired implant angle.

25. (Original) The method of claim 23, wherein altering the path of the ion beam comprises altering the path of the ion beam by an offset angle to compensate for angular error at the current target position.

26. (Original) The method of claim 25, further comprising determining the offset angle according to the desired implant angle and the current target position.

27. (Original) A method of performing ion implantation comprising:

generating an ion beam comprising a selected species; and

altering a path of the ion beam according to a desired implant angle to compensate for angular errors and a current target position.

28. (Original) The method of claim 27, wherein altering the path of the ion beam comprises:

deflecting the ion beam by a first offset angle in a first direction; and

deflecting the ion beam by a second offset angle in a second direction, wherein the second direction is opposite the first direction.

29. (Original) The method of claim 28, wherein altering the path of the ion beam further comprises selectively focusing the ion beam before deflecting the ion beam by the first offset angle, selectively focusing the ion beam before deflecting the ion beam by the second offset angle, and selectively focusing the ion beam after deflecting the ion beam by the second offset angle.

30. (Original) The method of claim 28, further comprising determining the first offset angle and the second offset angle according to the current target position and the desired implant angle.

31. (Original) The method of claim 27, wherein altering the path of the ion beam comprises altering the path of the ion beam by an offset angle to compensate for angular error at the current target position and determining the offset angle according to the desired implant angle and the current target position.

32. (Original) The method of claim 27, further comprising selectively focusing the ion beam.